

A modern epidemic

Expert perspectives on obesity and diabetes

Edited by Louise A Baur, Stephen M Twigg
and Roger S Magnusson



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Preface

The start of 2012 is marked by the establishment of the Charles Perkins Centre at the University of Sydney, with Professor Stephen J Simpson as Academic Director, to support research and education programs that will lead to real-world solutions for obesity, diabetes and cardiovascular disease. The centre is the result of a remarkable conversation where groups of diverse researchers and educators have come together to consider how they might combine forces and contribute real-world solutions to mitigate the growing impacts of these chronic diseases that are of increasing global concern.

The conversation was stimulated in part by the commitment of the University, with a A\$95m grant from the Australian Government, to a A\$395m infrastructure investment that will provide state-of-the-art education and research facilities that will serve the centre. The year 2011 was marked by some memorable milestones in support of this compelling vision. We broke ground on the new 45,000 square metre building that will become the hub for the academic program, which is now under construction in a strategic position next to the Royal Prince Alfred Hospital and Centenary Institute. We celebrated the sale of Picasso's portrait of Marie-Thérèse Walter at Christie's auction house. The funds (A\$20.3m) generated through the generous act of an anonymous donor will support chair appointments in disciplines supporting the academic program's strategic goals.

A series of workshops including 'The mind-body interface', 'E-health and social media', and 'Corporate social responsibility and obesity, diabetes and cardiovascular disease' have brought focus to the conversation in high priority areas. More than 300 academics worked together during the genesis of our centre, led by Professor David Ian Cook with support from many, but especially from Professor Warwick Britton and Dr Mark Ainsworth. These researchers created the first draft strategic plan for what has become a truly University-wide academic program – bringing together the excellence and breadth needed to realise an ambitious and timely vision.

This volume is the product of the passion and commitment of the contributing researchers to push forward the frontier of knowledge, and ensure the new knowledge impacts on the health and quality of life for individuals and our communities in the future.

Jill Trehwella
Deputy Vice-Chancellor (Research)

About the contributors

Brooke Adam is clinical psychologist at the Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders, the University of Sydney, where she is currently working on an National Health and Medical Research Council (NHMRC) trial examining the efficacy of psychological treatment for obese patients. In addition, Brooke is clinical psychologist at the Eating Disorders Day Program at Royal Prince Alfred Hospital, Sydney. Brooke has a strong research interest in obesity, as well as the psychological correlates between obese individuals and patients with ‘traditional’ eating disorders.

Shirley Alexander is clinical lecturer with the Discipline of Paediatrics and Child Health, Sydney Medical School, the University of Sydney and a general paediatrician, currently working as a staff specialist in the Weight Management Services (WMS) at the Children’s Hospital at Westmead. The WMS is a multidisciplinary service working with families of children and young people with overweight and obesity. Shirley has published broadly on the topic of child and adolescent obesity and is a sub-editor for the *Journal of Paediatrics and Child Health*.

Geoffrey Ambler is paediatric endocrinologist and diabetologist at the Children’s Hospital at Westmead, where he is co-head of the Institute of Endocrinology and Diabetes. He is also a clinical professor at the University of Sydney. He has a longstanding clinical and research interest in insulin resistance and obesity as well as clinical management of type 1 and type 2 diabetes, particularly the use of insulin pump therapy and other new technologies.

Carol Armour is professor of pharmacology at the Woolcock Institute of Medical Research, the University of Sydney. She is internationally recognised for her work in asthma research in terms of basic mechanisms of the disease and has had continuous funding from the NHMRC since 1982. More recently she has developed the evidence base for community pharmacy services in both asthma and diabetes, and has been successful in receiving tenders to test the implementation of these services in primary care.

Adrian Bauman is Sesquicentenary Professor of public health (behavioral epidemiology and health promotion) at the Sydney School of Public Health, the University of Sydney. He is also director of the Prevention Research Collaboration and of the Physical Activity, Nutrition and Obesity Research Group, both at the University of Sydney. Adrian is a world-renowned expert in physical activity and public health.

Louise A Baur is professor in the Discipline of Paediatrics and Child Health, Sydney Medical School, the University of Sydney, and also holds a conjoint appointment as professor in the Sydney School of Public Health, where she is co-director of the Prevention Research Collaboration. She is a consultant paediatrician and director of Weight Management Services at the Children’s Hospital at Westmead and Obesity team leader for the Charles

Perkins Centre, the University of Sydney. Louise researches in the areas of the prevention of childhood obesity, the antecedents of obesity and the metabolic syndrome in childhood and adolescence, the complications of paediatric overweight and obesity, and the effective management of obesity and related disorders in a variety of clinical settings.

Jennie Brand-Miller AM is professor of human nutrition at the School of Molecular Bioscience and the Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders, the University of Sydney. Jennie is currently a co-investigator on several nationally competitive grants, including an NHMRC project grant to reduce the risk of adverse pregnancy outcomes in women with gestational diabetes. She is a past president of the Nutrition Society of Australia and immediate past chair of the National Committee on Nutrition of the Australian Academy of Science.

Alex Brown is an Indigenous doctor and head of the Baker IDI Heart and Diabetes Institute in Central Australia. He has developed a leading national profile in Indigenous cardiovascular and metabolic disease research and policy development. He is a chief investigator in the Kanyini Vascular Collaboration and represents Aboriginal issues on key national committees and forums including the National Aboriginal and Torres Strait Islander Health Equality Council.

Stacy M Carter is senior lecturer in qualitative research in health at the Sydney School of Public Health, the University of Sydney and the Centre for Values, Ethics and the Law in Medicine, the University of Sydney. Stacy's expertise is in qualitative methodology and the ethics of public health, especially health promotion. Together with Lucie Rychetnik and Ian Kerridge, she is currently researching how health promotion professionals across NSW intervene in population weight. Stacy was the inaugural academic coordinator and director of the Master of Qualitative Health Research program at the University of Sydney, the first of its kind in Australia. She held a University of Sydney Thompson Fellowship in 2011, and holds an NHMRC Career Development Fellowship (2012–2015).

Alan Cass is senior director of the Renal and Metabolic Division at the George Institute for Global Health and a professor at the Sydney Medical School, the University of Sydney. He is a chief investigator in the Kanyini Vascular Collaboration and holds a National Health and Medical Research Council Principal Research Fellowship. He undertakes clinical research, intervention research in Aboriginal health, studies of the economic burden of chronic disease and implementation research focusing on translating research evidence into practice. He regularly works with governments and NGOs to develop strategies for chronic disease prevention and management.

Ian Caterson is currently Boden Professor of Human Nutrition and foundation director of the Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders, the University of Sydney. He has had a long interest and involvement in the causes, prevention and management of obesity. He has been involved in many prevention initiatives, including government committees and groups dealing with obesity. He has received funding from the NHMRC and other government agencies for many clinical trials.

Betty Chaar is lecturer in pharmacy practice and professional ethics at the Faculty of Pharmacy, the University of Sydney. Her publications and ongoing research are in the areas of pharmacy practice, moral reasoning, ethical decision-making, professional ethics in practice, misconduct, and ethics in the context of the practice in pharmacy, as well as the pharmaceutical industry. Her interest in obesity and weight management is from a community pharmacy perspective. She has investigated the types of services offered in pharmacy, what pharmacists would like to offer and what evidence there is for effectiveness. She is currently working with the Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders, the University of Sydney in this area.

Natalie Chilko is research assistant at the Sydney Nursing School, the University of Sydney, and at the Dementia Collaborative Research Centre, the University of New South Wales. Natalie's research interests include obesity, healthy ageing, and the behavioural and psychological symptoms of dementia.

Maria Craig is paediatric endocrinologist at the Children's Hospital at Westmead and St George Hospital, associate professor at the School of Women's and Children's Health, University of New South Wales and associate professor in the Discipline of Paediatrics and Child Health, Sydney Medical School, the University of Sydney. Her main research focus is childhood diabetes, including epidemiology, evidence-based medicine, the association between enteroviruses and diabetes, and microvascular complications. She holds an NHMRC career development award. She was co-chair of the NHMRC-approved Australian National Evidence Based Clinical Practice Guidelines for Type 1 Diabetes in Children, Adolescents and Adults (2011).

Michael J Dibley is a nutritional epidemiologist and associate professor in international public health at the Sydney School of Public Health, the University of Sydney. Over the last 20 years, Michael has explored the 'double burden of under and over nutrition' found in many countries in the Asia-Pacific region. In Vietnam and China he has collaborated on research assessing the magnitude of childhood and adolescent obesity, and investigated a wide range of environmental, social and behavioural risks factors associated with excess weight gain. He is currently participating in a cohort study of 800 adolescents in Ho Chi Minh City, Vietnam, which is examining the role of diet, physical activity and environmental change on the risk for adolescent overweight and obesity.

Kim Donaghue holds a conjoint appointment as professor in the Discipline of Paediatrics and Child Health, Sydney Medical School, the University of Sydney, and senior staff endocrinologist at the Children's Hospital at Westmead. She is co-head of Institute of Endocrinology and Diabetes and Head of Diabetes Services which also coordinates paediatric diabetes outreach services in rural NSW. Her major research interest is evidence-based medicine, and prevention of diabetes and its complications. She is editor of the 2012 *Global IDF/ISPAD Guideline for Diabetes in Childhood and Adolescence*. She served as Foundation Chair of Education and Training for Australasian Paediatric Endocrine Group in 2006–10.

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Nick Finer is consultant in obesity medicine at University College Hospital, London and a member of the Vascular Physiology Unit at Great Ormond Street Hospital for Sick Children. He is honorary professor in the Department of Medicine, University College London, visiting professor at the University of Sydney and Robert Gordon University, Aberdeen. Nick chairs the International Association for the Study of Obesity Education and Management Task Force, is past chair of the UK Association for the Study of Obesity and editor-in-chief of *Clinical Obesity*. His research focuses on clinical aspects of obesity and associated endocrine disease.

Murray Fisher is associate professor and director of Preregistration Programs in the Sydney Nursing School, the University of Sydney. Murray is currently the chief investigator on a number of research projects investigating the relationship of masculinity to men's health. Murray has an extensive publications record and has contributed to committees of professional organisations and discipline-specific regulatory bodies.

Klaus Gebel is research associate at the Sydney School of Public Health, the University of Sydney. He has master degrees in exercise science from the German Sport University Cologne and Victoria University, Melbourne, where he specialised first on exercise for rehabilitation and then on physical activity and public health. From 2005 to 2009 he did his PhD at the Sydney School of Public Health, the University of Sydney. Klaus has studied and worked at six universities in three countries and has received multiple scholarships and awards. His main research interests are in environmental determinants of physical activity and obesity and in the health benefits of physical activity.

Christian M Girgis received his graduate medical qualifications in 2004 from the University of New South Wales. He is currently in his final year of advanced physician training in the field of endocrinology and has recently commenced postgraduate studies in insulin resistance and vitamin D at the Garvan Institute of Medical Research, Sydney. He is a PhD student in the Sydney Medical School, the University of Sydney.

Jenny Gunton is the head of the Diabetes and Transcription Factors Group at the Garvan Institute of Medical Research, Sydney. The main interest of her lab is beta-cell function. She is also an endocrinologist at Westmead Hospital. She is the current vice-president of the Australian Diabetes Society. Jenny is a conjoint senior lecturer in the Sydney Medical School, the University of Sydney.

Connie Ha is a PhD candidate in the School of Molecular Bioscience, the University of Sydney. She has been investigating the diversity of gut microbial community under the supervision of Associate Professor Andrew Holmes. Connie is currently researching the

dietary factors that promote changes in the gut microbiota and the role of diet responsive microbes in host health.

Andrew Holmes is associate professor in microbiology in the School of Molecular Bioscience, the University of Sydney. His research interests revolve around applied microbial ecology with particular emphasis on the development of tools to enable management of the gut microbial ecosystem for health. He was the recipient of the 2006 Fenner Prize from the Australian Society for Microbiology. He is currently an editor of *Microbiology*, and a member of the editorial boards of *Applied and Environmental Microbiology* and *The ISME Journal*.

Tony Keech is professor of medicine, cardiology and epidemiology in the Sydney Medical School, the University of Sydney. He is consultant cardiologist at Royal Prince Alfred Hospital, Sydney, Principal Research Fellow of the NHMRC, and deputy director of the NHMRC Clinical Trials Centre. He is an expert in clinical trials research and has been involved in many large randomised trials undertaken in cardiovascular disease treatment and prevention. Impacts on clinical practice of his trials have been particularly important in treatments for acute myocardial infarction and lipid management to reduce morbidity and complications in type 2 diabetes mellitus.

Bridget Kelly is research dietitian in the Prevention Research Collaboration, the Sydney School of Public Health, the University of Sydney with both research and teaching responsibilities in public health nutrition. Her research focuses on the development of public policy to support healthy eating, in particular on food marketing and its effect on childhood weight and obesity.

Ian Kerridge is director and associate professor in bioethics at the Centre for Values, Ethics and the Law in Medicine, the University of Sydney and staff haematologist/bone marrow transplant physician at Royal North Shore Hospital, Sydney. He has published widely in ethics and medicine/haematology and is the author of over 150 papers in peer-reviewed journals and five textbooks of ethics, most recently *Ethics and law for the health professions* (Federation Press, 2009). He is chair of the Australian Bone Marrow Donor Registry Ethics Committee and a member of the NSW Health Department's Clinical Ethics Advisory Panel. His current research interests include the philosophy of medicine, public health ethics, evidence-based medicine, stem cells, end-of-life care, synthetic genomics, identity formation in illness, research ethics, organ donation and transplantation, and the pharmaceutical industry.

Lesley King is adjunct senior lecturer in the Prevention Research Collaboration, the Sydney School of Public Health, the University of Sydney, and the executive officer of the NSW Physical Activity Nutrition Obesity Research Group (PANORG) funded by NSW government to undertake policy-relevant research. Lesley has expertise in health promotion, chronic disease prevention and public health policy, with a focus on the design and implementation of community-based programs, and the dissemination of research into policy and practice. Lesley has had prior experience as a senior manager of health

promotion in government and non-government organisations. She has published academic papers on topics related to obesity prevention.

Ines Krass is professor in pharmacy practice at the Faculty of Pharmacy, the University of Sydney. Her research has focused on disease state management, screening and health promotion, and quality use of medicines in diabetes, asthma and cardiovascular disease. She has built a worldwide reputation in health services research in community pharmacy evidenced through significant competitive funding success, an extensive publication record, visiting professorships, invitations to speak at national and international conferences and contribute to subject reviews.

Yan Lam is Postdoctoral Research Fellow in the Boden Institute of Obesity, Nutrition, Exercise and Eating Disorders, the University of Sydney. Yan is currently undertaking an NHMRC-funded project which investigates the relationships between gut health, visceral fat inflammation and metabolic dysfunction. Yan has a unique background having trained in both clinical nutrition, and basic cell and molecular biology, which underpins both basic research into mechanisms of disease and translational work into the clinical setting.

Mu Li is associate professor in the Sydney School of Public Health, the University of Sydney. Mu's research interests include micronutrient deficiencies disorders, international program evaluation and childhood obesity. Mu is currently a co-chief investigator of a study in China to investigate the feasibility and acceptability of using mobile phone short messages to promote breastfeeding and healthy infant feeding in new mothers, in order to prevent early childhood obesity.

Roger S Magnusson is professor of health law and governance at the Sydney Law School, the University of Sydney. His research interests are in public health law and governance, health law and bioethics, global health and health development. His publications include *Angels of death: exploring the euthanasia underground* (Melbourne University Press, 2002) which reported on the practice of illicit, physician-assisted suicide and euthanasia among health professionals working in HIV/AIDS healthcare. His current research focuses on the opportunities for law and regulation in responding to chronic, non-communicable diseases, including those caused by tobacco use, obesity and poor diet.

Marg McGill is adjunct associate professor at the Sydney Medical School (Central Clinical School) and the Sydney Nursing School, the University of Sydney. She was appointed Australia's first paediatric diabetes educator in 1978. She has been manager of the Diabetes Centre at Royal Prince Alfred Hospital, Sydney for more than two decades. Marg was elected vice-president of the International Diabetes Federation (IDF) in 2003 and was senior vice-president from 2006 to 2009. She was chair of the IDF Consultative Section on Diabetes Education (DECS) for nine years. During this time she made significant contributions to improving the status of diabetes education as a profession as well as developing initiatives to assist in building the skills of physicians and health professionals working in diabetes care globally. Her clinical and research interests and publications are focused on the assessment and management of diabetic complications. She was named in

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Susan V McLennan is principal hospital scientist at Royal Prince Alfred Hospital, Sydney and associate professor in medicine at the Sydney Medical School, the University of Sydney. Her principal area of expertise is the role of the MMP/TIMP system in extracellular matrix turnover, with a focus in diabetes on microvascular complications, liver disease, cardiomyopathy and wound healing. She has been investigating the role of the MMP/TIMP system in regulation of fibrosis, including the effects of high glucose and advanced glycation regulation of extracellular matrix turnover in diabetic kidney disease, and the development of methods for the collection of fluids from human diabetic wounds to study bacterial growth and wound fluid MMP concentrations. Susan is a basic scientist who is committed to linking clinical and laboratory based research in order to rapidly progress from bench to bedside.

Rohan Miller is senior lecturer in marketing and marketing communications in the University of Sydney Business School. He was formerly an advertising practitioner and now consults to industry, government and peak industry groups. Rohan's research investigates negative effects of consumption, advertising to children, and public policy.

Michael Murray is professor of pharmacogenomics at the Faculty of Pharmacy, the University of Sydney. After a postdoctoral period at Cornell University, US he returned to Westmead Hospital, was appointed as an NHMRC Research Fellow in 1987, and was promoted in 1989 and 1994 to Senior and Principal Research Fellow, respectively. In 1995 he received a DSc from the University of Sydney. Michael is the author of 168 publications and has presented 70 symposia and seminars. In 2002 he was the ASCEPT visitor to the British Toxicology Society.

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Jenny O'Dea is a dietitian, health and nutrition education researcher and professor in nutrition and health education in the Faculty of Education and Social Work, the University of Sydney. Jenny is currently working on two large Australian Research Council studies investigating body image, weight issues, self-concept, self-esteem, and eating issues. Jenny is well known for her contributions to the international media and public debate about food, nutrition, body image, obesity and has authored many scientific research publications as well as five books including *Everybody's different: a positive approach to teaching about health, puberty, body image, nutrition, self-esteem and obesity prevention* (ACER Press, 2007)

and *Childhood obesity prevention: international research, controversies and interventions* (Oxford University Press, 2010).

Jane Overland is clinical associate professor at the Sydney Nursing School, the University of Sydney. She has worked in chronic disease management for over 20 years and she speaks widely in the area of diabetes and healthcare delivery to a range of healthcare professionals, both nationally and internationally. She is an active researcher, attracting over \$500,000 in research grants during her career and successfully publishing in a range of peer-reviewed journals. She has acted as a consultant to both government and non-government health related bodies. She has also successfully supervised postgraduate students from a variety of health-related faculties.

Philayrath Phongsavan is senior lecturer with the Prevention Research Collaboration, the Sydney School of Public Health, the University of Sydney. Philayrath's research specialises in social epidemiology, behavioural science, and disease prevention and health promotion program evaluation. Her other research interest is evaluating the impact of redesign of urban public open spaces in socially disadvantaged areas and the effect on residents' physical activity behaviour, obesity, and sense of community and safety.

David Raubenheimer is professor of nutritional ecology at the Institute of Natural Sciences, Massey University, Auckland, New Zealand. Born in South Africa, David was based at Oxford University for 16 years, where he obtained his DPhil, before moving to New Zealand in 2004. In a long-term collaboration with Stephen J Simpson, David has developed the geometric framework for nutrition, and used it to address a wide range of problems in biology. His current research focus is on developing nutritional geometry for use in field studies, an extension that is being applied to a range of study systems spanning marine fish, birds, dolphins, large predators (tigers and snow leopards) and primates including humans. David has been Visiting Fellow at the Smithsonian Institute, a Fellow of the Institute for Advanced Study (Wissenschaftskolleg) in Berlin, distinguished lecturer in behavioural and brain sciences at Cornell University, Fellow at the Institute for Advanced Study in Oslo, and Visiting Research Fellow at the University of Sydney. He heads the Nutritional Ecology Research Group at Massey University, and is senior associate member of the New Zealand Institute for Advanced Study.

Elizabeth Rieger is associate professor and clinical psychologist in the Department of Psychology, Australian National University. Elizabeth has published widely in the area of eating and weight disorders, and is currently chief investigator on a randomised controlled trial funded by the NHMRC to investigate the effectiveness of motivational enhancement therapy for obese patients and their support network.

Chris Rissel is professor of public health at the Prevention Research Collaboration, the Sydney School of Public Health, the University of Sydney. His main research interests focus on obesity prevention and active travel, particularly cycling advocacy. He is one of the authors of the national report 'Cycling: getting Australia moving. Barriers, facilitators and interventions to get more Australians physically active through cycling.' He has just completed a three-year grant to promote increased use of cyclepaths in south-west Sydney

– ‘Cycling connecting communities’, and is currently involved in an ARC grant looking at safer cycling.

Lucie Rychetnik is Senior Research Fellow at the Sydney School of Public Health, the University of Sydney. Her main areas of interest and expertise are the appraisal, translation and application of evidence for public health and health promotion policy and practice. From 2000 to 2009 Lucie was senior associate at the Sydney Health Projects Group (SHPG), an academic consulting group in the Sydney School of Public Health, the University of Sydney whose primary role was to translate research evidence for a wide range of public health policy and practice settings. She joined the School of Public Health, Screening and Test Evaluation Program (STEP) in September 2009, where she primarily conducts qualitative research to complement and enhance the established program of quantitative research. In March 2010 she joined the Centre for Values, Ethics and the Law in Medicine (VELIM), the University of Sydney as chief investigator on an NHMRC project – ‘Reconceptualising health promotion: the role of values, ethics and evidence in obesity intervention’. Prior to completing her MPH (1996) and PhD (2001) she worked in the health sector as a clinical dietitian and community nutritionist in Oxford, London and Sydney, and as a health promotion officer with the (then) Southern Sydney Area Health Service.

Amanda Sainsbury is conjoint associate professor in the Sydney Medical School, the University of Sydney. She leads a research team at the Garvan Institute of Medical Research, Sydney investigating how the brain and diet interact to control body weight and body composition. Her research is funded by a Career Development Award and competitive grants from the NHMRC, and spans studies with transgenic mice to randomised controlled clinical weight-loss trials in humans. Amanda disseminates her research findings to the wider community by lecturing to students in science, medicine, nursing and human movement, and she has authored two books and given seminars on weight management for health professionals and the public.

Alexandra Sharland is senior lecturer in transplantation immunobiology in the Collaborative Transplantation Research Group, the University of Sydney. Her research encompasses innate immunity and inflammation in brain death and ischaemia-reperfusion injury, autoimmunity, and the mechanisms by which these factors promote transplant rejection and interfere with the development of transplantation tolerance. She is a former councillor of the Transplantation Society of Australia and New Zealand, and chair of the TSANZ Scientific Advisory Committee.

Stephen J Simpson is the Academic Director of the Charles Perkins Centre and an Australian Research Council Laureate Fellow in the School of Biological Sciences, the University of Sydney, having returned to Australia in 2005 as an ARC Federation Fellow after 22 years at Oxford where he was professor of entomology and curator of the University Museum of Natural History. Stephen has pioneered developments at the interface of nutritional physiology, ecology, and behaviour. Together with David Raubenheimer, he developed state-space models for nutrition (the geometric framework), which were devised and tested using insects but have since been applied to a wide range of animals and problems, from

aquaculture and conservation biology to the dietary causes of human obesity. His research on locusts has led to an understanding of locust swarming that links chemical events in the brains of individual insects to landscape-scale mass migration. Stephen has been visiting professor at Oxford, a Fellow of the Institute for Advanced Study (Wissenschaftskolleg) in Berlin, Distinguished Visiting Fellow at the University of Arizona, and guest professor at the University of Basel. In 2007 he was elected a Fellow of the Australian Academy of Science, in 2008 he was awarded the Eureka Prize for Scientific Research, in 2009 he was named NSW Scientist of the Year, and in 2010 he was named as the Wigglesworth Medallist by the Royal Entomological Society of London.

Paul Snelling is senior staff specialist in nephrology at Royal Prince Alfred Hospital, Sydney. He has extensive experience in renal service delivery to Indigenous Australians and was previously director of Renal Services in the Northern Territory. He provides crucial clinical input and understanding to a broad range of Aboriginal health and kidney health research programs and has worked closely with government in the development of strategies for renal service provision.

Kate Steinbeck is the Medical Foundation Chair of Adolescent Medicine, the University of Sydney and is an adolescent endocrinologist and physician. She has significant experience in the management of secondary obesity, including post-craniopharyngioma obesity and the Prader-Willi syndrome. Her research interests include the longitudinal effects of puberty hormones on weight and body composition, and obesity management in the transition from adolescence to young adulthood.

Stephen M Twigg is professor in medicine at the Sydney Medical School, the University of Sydney, Diabetes theme leader for the Charles Perkins Centre, the University of Sydney, and deputy head of Department of Endocrinology and medical head of the Endocrinology Research Laboratories at Royal Prince Alfred Hospital, Sydney. His research focuses on the prevention and management of diabetes complications including pathogenic growth factors and tissue fibrosis, as well as optimisation of quality and length of life in people with diabetes. As a physician-scientist, he is dedicated to optimising healthcare delivery in diabetes, finding scientific solutions to the medical problems related to diabetes and its complications, and mentoring and training advanced clinical trainees in clinical skills, and laboratory students and fellows in the scientific method. He is the immediate past president of the Australian Diabetes Society, and a past honorary board member of Diabetes Australia.

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